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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,623	04/02/2004	Kia Silverbrook	HYT006US	9569
24011	7590	09/08/2004	EXAMINER	
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			TAYLOR, APRIL ALICIA	
			ART UNIT	PAPER NUMBER
			2876	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/815,623

Applicant(s)

SILVERBROOK ET AL.

Examiner

April A. Taylor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 and 43-60 is/are rejected.
- 7) ☒ Claim(s) 30-42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on applications filed in Australia on April 07, 2003 and April 15, 2003. It is noted, however, that applicant has not filed certified copies of the 2003901617 and 2003901795 applications as required by 35 U.S.C. 119(b).

### ***Specification***

2. The disclosure is objected to because of the following informalities: The co-pending applications are listed with the attorney document numbers, which should be change to US application numbers (see pages 1-2). Appropriate correction is required.
3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

4. Claims 1-47 and 54-60 are objected to because of the following informalities:
- Re claim 1: Substitute "adapted to scan" with -- for scanning -- (see line 1).
- Re claim 1: Substitute "adapted to be" with -- being -- (see line 5).
- Re claim 3: Substitute "is adapted to sense" with -- senses -- (see line 2).
- Re claim 4: Substitute "being adapted to sense" with -- senses -- (see line 2).

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Re claim 12: Substitute "is adapted to use" with -- uses -- (see line 1).

Re claim 28: Substitute "being adapted to detect" with -- detects -- (see line 1).

Re claim 29: Delete "is adapted to" (see line 1).

Re claim 29: Substitute "determine" with -- determines -- (see lines 2 and 3 respectively).

Re claim 29: Substitute "activate" with -- activates -- (see line 4).

Re claim 30: Substitute "centre" with -- center -- (see line 3).

Re claim 31: Substitute "is adapted to distinguish" with -- distinguishes -- (see lines 1-2).

Re claim 39: Substitute "centre" with -- center -- (see line 4).

Re claim 54: Substitute "adapted to scan" with -- scans -- (see line 2).

Re claim 54: Substitute "it" with -- the scanning patch -- (see line 8).

Re claim 55: Substitute "adapted to scan" with -- scans -- (see lines 1-2).

Re claim 56: Substitute "adapted to scan" with -- scans -- (see lines 1-2).

Re claim 57: Substitute "adapted to scan" with -- scans -- (see lines 1-2).

Re claim 58: Substitute "adapted to scan" with -- scans -- (see lines 1-2).

Re claim 59: Substitute "adapted to read" with -- for reading -- (see lines 1-2).

Re claim 60: Substitute "adapted to read" with -- for readings -- (see lines 1-2).

Re claim 60: Substitute "adapted to be" with -- being -- (see line 6).

Appropriate correction is required.

(Note: All other claims are objected to since they depend upon an objected claim)

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-10, 15-29, and 43-60 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilz, Sr. et al. (US 6,772,949), hereinafter Wilz.

Re claims 1-3, 48-50, and 54-60: Wilz teaches a scanning device comprising a housing being held by a user, the housing including a grip and a nose having an aperture; a laser for emitting a scanning beam from the housing, the scanning beam being directed in first and second orthogonal directions to thereby generate a raster scan pattern over a scanning patch; a sensor for sensing coded data; a processor for determining product identity data indicative of the identity of the product item; an input control; and wherein the sensor senses the coded data upon activation of the input control by at least one of a user and physical contact between the housing and the product item. (See col. 20, line 45 to col. 21, line 32; col. 62, line 66 to col. 64, line 42)

Re claims 4 and 51: Wilz teaches wherein the input device includes a trigger, the scanning device senses coded data in response to activation of the trigger by the user (see col. 2, lines 53+; and col. 20, line 45 to col. 21, line 32)).

Re claims 5, 7, 8, and 52: Wilz teaches wherein the coded data encodes an EPC associated with the product item, and wherein the processor determines the EPC and generates scan data representing the identity of the product item (see col. 62, line 66 to col. 64, line 42).

Re claim 6: Wilz teaches wherein the product identity data distinguishes the product item from every other product item (see col. 20, line 45 to col. 21, line 32; and col. 62, line 66 to col. 64, line 42).

Re claim 9: Wilz teaches wherein the processor determines the product identity data of the product item during a scan event; and generates the scan data if the determined product identity data is different to product identity data determined during previous scan events (see col. 20, line 45 to col. 21, line 32; and col. 62, line 66 to col. 64, line 42).

Re claim 10: Wilz teaches wherein the processor compares the determined product identity data to previously determined product identity data; and generates scan data representing the identity of the product item if the determined product identity data has not been previously determined (see col. 20, line 45 to col. 21, line 32; and col. 62, line 66 to col. 64, line 42).

Re claims 15, 16, 19, and 20: Wilz teaches wherein the coded data is indicative of a plurality of reference points; wherein each reference point corresponds to a respective location on the interface surface; and wherein the processor generates position data representing the position of a sensed reference point on the interface surface (see col. 20, line 45 to col. 21, line 32; and col. 62, line 66 to col. 64, line 42).

Re claims 17-20: Wilz teaches wherein the interface surface includes at least one region, the region including coded data indicative of an identity of the region, and wherein the processor determines the identity of the at least one region from at least some of the sensed coded data (see col. 20, line 45 to col. 21, line 32; and col. 62, line 66 to col. 64, line 42).

Re claim 21: Wilz teaches wherein the interface surface is printed using a printer (see col. 20, line 45 to col. 21, line 32; and col. 62, line 66 to col. 64, line 42).

Re claims 22, 23, 57, and 58: Wilz teaches wherein the scanning device includes at least one deflector for deflecting the scanning beam in the first and second orthogonal directions to thereby generate the raster scan pattern over the scanning patch; wherein the at least one deflector includes at least one of a rotating holographic element, first and second acoustic-optic deflectors, and resonant scanning mirrors (see col. 20, line 45 to col. 21, line 32; col. 60, line 29+; col. 62, line 66 to col. 64, line 42; col. 67, line 16+).

Re claim 24: Wilz teaches wherein the scanning device includes an amplitude modulator positioned between the laser and the at least one deflector (see col. 20, line 45 to col. 21, line 32; col. 60, line 29+; col. 62, line 66 to col. 64, line 42; col. 67, line 16+).

Re claim 25: Wilz teaches wherein the scanning device determines from radiation sensed by the sensor ambient light incident on the sensor and the radiation reflected from the interface surface; and senses the coded data from the radiation

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reflected from the interface surface (see col. 20, line 45 to col. 21, line 32; col. 60, line 29+; col. 62, line 66 to col. 64, line 42).

Re claim 26: Wilz teaches wherein the scanning device includes a focusing element positioned between the amplitude modulator and the deflector for focusing the beam (see col. 41, line 26 to col. 44, line 34).

Re claim 27: Wilz teaches wherein the scanning device includes a bandpass filter (see col. 81, line 53 to col. 82, line 11).

Re claims 28 and 29: Wilz teaches wherein the scanning device detects the presence of a plurality of product items in the sensing region; and wherein the processor determines the presence of two or more coded data portions during a scanning event; determines product identity data corresponding to each detected coded data portion; and activates an alarm if the determined product identity data is indicative of more than one product item (see col. 20, line 45 to col. 21, line 32; col. 60, line 29+; col. 62, line 66 to col. 64, line 42).

Re claim 43: Wilz teaches wherein the coded data is printed on the interface surface in infrared ink, and the scanning beam is an infrared scanning beam (see col. 20, line 45 to col. 21, line 32; col. 60, line 29+; col. 62, line 66 to col. 64, line 42).

Re claims 44 and 53: Wilz teaches wherein the scanning device senses coded data from the interface surfaces of a number of product items substantially simultaneously (see col. 20, line 45 to col. 21, line 32; col. 60, line 29+; col. 62, line 66 to col. 64, line 42).



Re claim 45: Wilz teaches wherein the scanning device further includes a memory (see col. 20, line 45 to col. 21, line 32; col. 60, line 29+; col. 62, line 66 to col. 64, line 42).

Re claims 46 and 47: Wilz teaches wherein the interface surface is at least one of a product item packaging; a product item labeling; and a surface of the product item (see figs. 6A-6C).

Re claim 59: Wilz further teaches a reading device having a housing for mounting on at least one finger of the user in use, the housing including an aperture (see figs. 5A-5D).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilz, Sr. et al. (US 6,772,949), (hereinafter Wilz) in view of Roustaei et al (US 6,685,095), (hereinafter Roustaei). The teachings of Wilz have been discussed above.

Wilz fails to teach or fairly suggest wherein the coded data is redundantly encoded using Reed-Solomon encoding; wherein the processor uses the redundantly encoded data to detect one or more errors in the coded data; and wherein the reading device corrects the one or more detected errors.

Roustaei teaches an optical code reading system wherein a coded data is redundantly encoded using Reed-Solomon encoding; wherein the processor uses the redundantly encoded data to detect one or more errors in the coded data; and wherein the reading device corrects the one or more detected errors (see abstract; col. 3, line 66 to col. 4, line 16; and col. 4, line 54 to col. 5, line 8). In view of Roustaei's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to employ the well known Reed-Solomon code; and a system for detecting errors in the coded data and correcting the detected errors to the teachings of Wilz in order to ensure that the information read from the optically encoded data is accurate.

***Allowable Subject Matter***

9. Claims 30-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record, taken alone or in combination, fail to teach or fairly suggest wherein the coded data is disposed with at least one layout, the layout having at least order  $n$  rotational symmetry, where  $n$  is at least two, the layout including  $n$  identical sub-layouts rotated  $1/n$  revolutions apart about a center of rotational symmetry of the layout, the coded data disposed in accordance with each sub-layout including rotation indicating data that distinguishes the rotation of that sub-layout from the rotation of at least one other sub-layout within the layout.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pat. No. 6,764,012 to Connolly et al

US Pat. No. 6,607,134 to Bard et al

US Pat. No. 6,234,393 to Paratore et al

US Pat. No. 6,375,079 to Swartz

US Pat. No. 6,651,886 to Gurevich et al

***Contact Information***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to April A. Taylor whose telephone number is (571) 272-2403. The examiner can normally be reached on Monday - Friday from 6:30AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [april.taylor@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the

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confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AAT

03 September 2004



KARL D. FRECH  
PRIMARY EXAMINER